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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/764,242	01/19/2001	George Wong	CS98-070B	8930

28112 7590 04/24/2003

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EXAMINER

DIAZ, JOSE R

ART UNIT PAPER NUMBER

2815

DATE MAILED: 04/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/764,242

Applicant(s)

WONG, GEORGE

Examiner

José R Díaz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 18-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

➤ A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 8, 2003 has been entered.

### ***Claim Rejections - 35 USC § 102***

➤ The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

➤ Claims 18 and 19 are still rejected under 35 U.S.C. 102(e) as being anticipated by Saitou et al. (US Pat. No. 5,739,546). See Office action mailed on June 13, 2002 .

***Claim Rejections - 35 USC § 103***

➤ The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

➤ Claim 20 is still rejected under 35 U.S.C. 103(a) as being unpatentable over Saitou et al. (US Pat. No. 5,739,546) in view of Lou (US Pat. No. 5,759,906). See Office action mailed on June 13, 2002.

➤ Claims 21-22 are still rejected under 35 U.S.C. 103(a) as being unpatentable over Saitou et al. (US Pat. No. 5,739,546). See last Office action mailed on June 13, 2002.

***Response to Arguments***

Applicant's arguments filed April 8, 2003 have been fully considered but they are not persuasive. In summary, Applicant argues that Saitou et al. fails to teach a patterned fill layer, a planar silicon oxide layer, and a multilevel metal structure. However, the Examiner disagrees. With regards to the patterned fill layer, the reference Saitou et al. teaches a patterned conductive layer formed in the semiconductor region (2) and in the kerf areas (3) (see Figure 2). Please note, that the patterned conductive layer formed in the semiconductor region is identified by the reference sign (10), and the patterned conductive layer formed in the kerf areas is identified by the reference sign (6)

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(see Figure 1), both formed of the same metal material (please note that regions 6 and 10 are shown in Figure 2 having the same line pattern). In addition, the reference Saitou et al. teaches that the kerf area (3) are filled with the conductive layer (8) (see Figure 1) and the patterned conductive layer (6) (see Figure 2). Please note that Figure 1 does not show the patterned conductive layer (6) because the patterned conductive layer (6) is formed under the conductive layer (8) (see Figure 2). Thus, the patterned conductive layer (6) of Saitou et al. is a "patterned fill layer" since the patterned conductive layer (6) is formed in the kerf areas and is formed of the same metal material as the patterned conductive layer formed in the semiconductor region.

With regards to the planar silicon oxide layer, the Examiner disagrees with Applicant. Saitou et al. teaches a silicon oxide layer (7) formed on the patterned fill layer (6) (see Figure 2). After a carefully review of the drawings, the Examiner concluded that Figure 3, which is a cross sectional view of Figure 1, further provides the teaching of a planar layer, as required by Applicant. Figure 3 shows that, the silicon oxide layer (7) is planar over the surface of the patterned fill layer (6). Consequently, the reference Saitou et al. anticipates the claimed limitation since Saitou et al. teach a planar silicon oxide layer formed over the patterned fill layer.

Finally, with regards to the multilevel metal structure, the Examiner would like to point out that the reference Saitou et al. clearly anticipates such a limitation in column 6, lines 61-65, wherein Saitou et al. states that multilevel metal structure can also be formed as required. Therefore, Saitou et al. anticipates the claimed limitation of providing a multilevel metal structure.

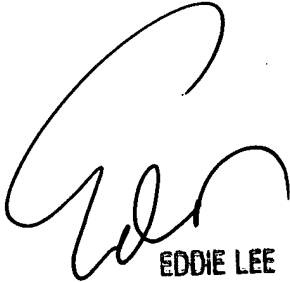
***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to José R Díaz whose telephone number is (703) 308-6078. The examiner can normally be reached on 9:00-5:00 Monday, Tuesday, Thursday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on (703) 308-1690. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 746-3891 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

JRD  
April 22, 2003



EDDIE LEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800